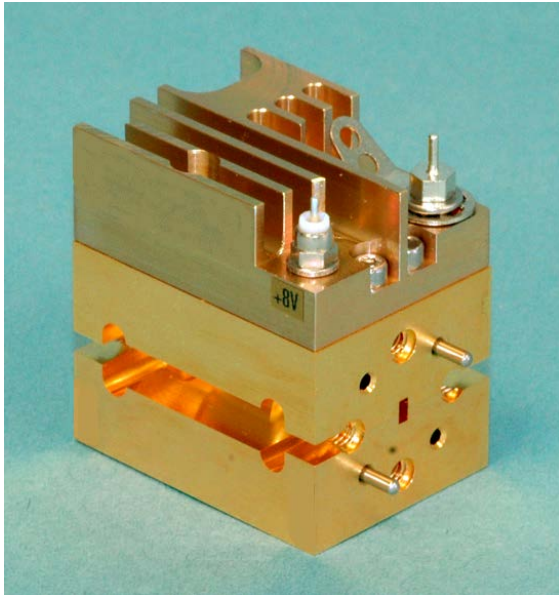


## MILLIMETER-WAVE GAN POWER AMPLIFIERS



### DESCRIPTION

Millitech's Gallium Nitride (GaN) based power amplifiers represent a quantum leap in output power at E-Band and W-Band with up to 2.5 Watts of output power and up to 20% PAE available in standard models. These new AMP models from Millitech offer catered performance over specific allocated bands or wideband power covering 75 GHz to 102 GHz.

The E-Band (WR-12) models cover the commercially allocated 71-76GHz and 81-86 GHz bands.

Each amplifier has internal bias circuitry that generates gate control voltages, provides proper voltage sequencing and incorporates reverse

### FEATURES:

- Revolutionary E-Band and W-Band Power
- Standard models > 1 Watt  $P_{SAT}$
- Compact Modular In-Line Design
- High Efficiency
- Power combined versions for even Higher Output Power
- Standard Waveguide interfaces
- Internal voltage regulation and bias-sequencing circuitry

### APPLICATIONS:

- E-Band Radio
- High Power Sources
- Test and Measurement
- Radar front-ends
- Communication subsystems
- Remote Sensing

voltage protection from a single positive external bias.

Single device models are available with nearly 1W of saturated output power. Standard models also include 2-way and 4-way Solid State Power Amplifiers (SSPAs) with up to 2.5 Watts of saturated output Power. Higher powers are available. Contact Millitech for specific details.

See our complete line of amplifiers (series AMP) and low noise amplifiers (series LNA) for models covering 10-130GHz. When combined with our full band active multiplier chains (series AMC), these amplifiers make excellent high power frequency extenders for conventional microwave signal sources.

## SPECIFICATIONS

### GaN Amplifiers

Model Number	F <sub>LOW</sub> (GHz)	F <sub>HIGH</sub> (GHz)	Gain (typ.) (dB)	1dBCP (typ.) (dBm)	Psat (typ.) (dBm)	Connector	Current (A) (typ. at Psat)	Input Voltage (V) (min-max)
AMP-28-01290	29	31	21	*	36	WR-28	1	22 – 26
AMP-28-61290 <sup>1</sup>	29	31	40	*	43	WR-28	7	22 – 26
AMP-28-01280	33	36	11	*	41	WR-28	2	30 – 34
AMP-28-41280 <sup>1</sup>	33	36	21	*	46.5	WR-28	10	30 – 34
AMP-12-20010 <sup>2</sup>	71	76	15.0	28.6	31.1	WR-12	0.71	14 – 18
AMP-12-20020 <sup>2</sup>	81	86	17.5	28.0	31.6	WR-12	0.77	14 – 18
AMP-10-01300 <sup>3</sup>	92	96	15	*	30	WR-10	0.4	19 – 23
AMP-10-41300 <sup>3</sup>	92	96	29	*	35	WR-10	2	19 – 23

\*Contact Millitech for details.

1 – Preliminary.

2 – Reliability testing in progress.

3 – Coming soon.

For outline drawings and more information, see <http://www.millitech.com/pdfs/specsheets/IS000034-AMP.pdf>